Printable stair code requirements

IRC stair limits for one- and two-family homes

What	The rule	IRC 2024 / 2021
Riser height	7 3/4 in (196 mm) at most, measured between the leading edges of the treads.	R318.7.5.1 / R311.7.5.1
Tread depth	10 in (254 mm) at least, nosing to nosing.	R318.7.5.2 / R311.7.5.2
Same size all the way	The largest riser may exceed the smallest by 3/8 in (9.5 mm) at most in one flight; the same for treads.	R318.7.5.1-.2 / R311.7.5.1-.2
Nosing	3/4 to 1 1/4 in (19-32 mm) on solid risers; not required where treads are 11 in (279 mm) or deeper.	R318.7.5.3 / R311.7.5.3
Open risers	Where the opening is more than 30 in (762 mm) above the floor or grade below, a 4 in (102 mm) ball must not pass through.	R318.7.5.1 / R311.7.5.1
Headroom	6 ft 8 in (2032 mm) at least, measured straight up from the line of the nosings.	R318.7.2 / R311.7.2
Rise of one flight	12 ft 7 in (3835 mm) at most between floors or landings; a taller stair needs a landing.	R318.7.3 / R311.7.3
Width	36 in (914 mm) clear above the handrail; 31 1/2 in (787 mm) at and below it with one handrail, 27 in (698 mm) with two.	R318.7.1 / R311.7.1
Landings	A floor or landing at the top and bottom of each flight, at least as wide as the stair and 36 in (914 mm) deep on a straight run.	R318.7.6 / R311.7.6
Handrail	On at least one side of every flight with four or more risers, 34 to 38 in (864-965 mm) above the nosings.	R318.7.8, R320.2 / R311.7.8
Guard	On open sides more than 30 in (762 mm) above the floor or grade; at least 34 in high along a stair, measured from the nosings.	R321.1 / R312.1

International Residential Code 2024 and 2021 (International Code Council). Your local code, and its amendments, govern.

woodworkingmath.com/carpentry/stair-code-requirements/ Version 7 Nov 2026. Free to share under CC BY 4.0: credit Woodworking Math (woodworkingmath.com).